



A Second Reboot: Information Technology in the Twin Cities

Feature:

Choosing the Right Path

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In November 2004 Employment Review spotlighted information technology (IT) in the seven-county Twin Cities region of Minnesota. At the time IT had undergone significant employment fluctuations almost entirely attributed to the dot-com bubble of the late 1990s and the subsequent burst of that bubble in 2000. Four years after the burst, IT employment was primed for resurgence in the Twin Cities. IT-related industries were entering the Twin Cities area, vacancies were climbing steadily, and unemployment insurance claims were on the downward trend. So what ultimately happened with IT in the Twin Cities? Was the Golden Age of IT just around the corner?¹

Fast forward to April 2010. With the state just beginning to climb its way out of the Great Recession, Employment Review once again turned the spotlight to IT, and once again IT employment had undergone major fluctuations. Strong employment gains made between 2004 and 2007 had been wiped away. Taking a look at Computer Systems Design and Related Services reveals these stark losses. This industry subsector, which employs more computer and mathematical occupations than any other subsector, grew by a remarkable 21 percent between 2004 and 2007, when total employment grew by 3 percent. By 2010, however, this subsector contracted by 5 percent, shedding more than 1,200 jobs.

¹Uphoff, Kyle. "Labor Market Rebooted: Information Technology Employment in the Twin Cities." *Minnesota Employment Review* (November, 2004): 12-14.

Losses in IT during the Great Recession were deep and broad. In Review’s 2010 analysis of the top 18 employing IT industries, two-thirds witnessed employment losses between 2008 and 2009.² Clearly, the Golden Age of IT was derailed once again in the Twin Cities.

Defining the IT Occupation

Information Technology can be a nebulous term for defining specific occupations and industries. For the purposes of this article, IT will refer to 13 computer occupations as nationally defined by the Bureau of Labor Statistic’s Standard Occupational Classification System (Table 1). It should be noted that significant updates were made in 2010 to this classification system.

For example, four new computer occupations were introduced to reflect technological changes: Web developers, information security analysts, computer network architects, and computer network support specialists. Other revisions ranged from occupational title and description changes to the assigning of new codes.³

As of the second quarter 2013, the 13 IT-related occupations accounted for an estimated 65,910 jobs in the Twin Cities or 4 percent of the region’s total employment. Computer Systems Analysts, with an estimated 11,520 jobs, is the single largest-employing IT occupation in the Twin Cities. The average median hourly wage for Computer Systems Analysts, at \$39.48, is significantly higher than the

average median hourly wage for the total of all occupations in the Twin Cities, \$19.92. Starting wages for IT occupations, typically set around the 10th percentile wage, are also significantly higher than the average starting wage for all occupations (Table 1). These higher wages can be attributed to higher requirements for advanced computer and statistical skill sets as well as increased needs for post-secondary education.⁴

Another method to gauge the importance of IT in the Twin Cities is an analysis of employment concentration. This can be done with location quotients which compare the share of employment at a local level to that of a base level, often the national economy. Analyzing state to national employment

Table 1: Twin Cities Information Technology Employment Statistics, First Quarter, 2014, Wage Data, Second Quarter, 2013, Employment Data

Occupation	Employment	10th Percentile Wage	Median Wage	Location Quotients	
				Region-U.S.	State-U.S.
Total, All Occupations	1,660,560	\$9.20	\$19.92	-	-
Computer Systems Analysts	11,520	\$26.35	\$39.48	1.81	1.25
Software Developers, Applications	8,900	\$29.24	\$44.51	1.10	0.86
Computer User Support Specialists	8,580	\$16.14	\$24.29	1.27	1.07
Computer Occupations, All Other	7,570	\$21.39	\$35.29	3.08	2.21
Software Developers, Systems Software	6,650	\$29.28	\$45.60	1.42	1.15
Network and Computer Systems Administrators	6,390	\$25.20	\$36.97	1.41	1.10
Computer Programmers	4,630	\$21.76	\$36.08	1.18	0.90
Computer Network Architects	2,760	\$30.82	\$44.63	1.56	1.32
Computer Network Support Specialists	2,530	\$20.12	\$30.19	1.22	0.98
Database Administrators	2,320	\$25.03	\$41.62	1.61	1.15
Web Developers	2,240	\$19.86	\$33.35	1.59	1.15
Information Security Analysts	1,450	\$29.26	\$44.09	1.48	1.02
Computer and Information Research Scientists	370	\$30.22	\$58.42	1.21	0.77

Source: DEED Occupational Employment Statistics

²Vilsack, Rachel. "Twin Cities Trends in Information Technology." *Minnesota Employment Review* (April, 2010): 1-4.

³Watson, Audrey L. "Implementing the 2010 Standard Occupational Classification in the Occupational Employment Statistics Program." *Monthly Labor Review* (2013): 36-49.

⁴Csorny, Lauren. "Careers in the Growing Field of Information Technology Services." *Beyond the Numbers*, Vol. 2, No. 9. Bureau of Labor Statistics, April 2013.

shares reveals Computer Systems Analysts, Computer Network Architects, and Computer Occupations, All Other to be highly concentrated in Minnesota. Comparing the Twin Cities to the nation, however, reveals nearly every IT occupation to be highly concentrated in the Seven-County Metro Area.⁵ These high levels of concentration came as no surprise since more than 80 percent of Minnesota’s IT employment is located in the Twin Cities.

The Elusive Golden Age of IT

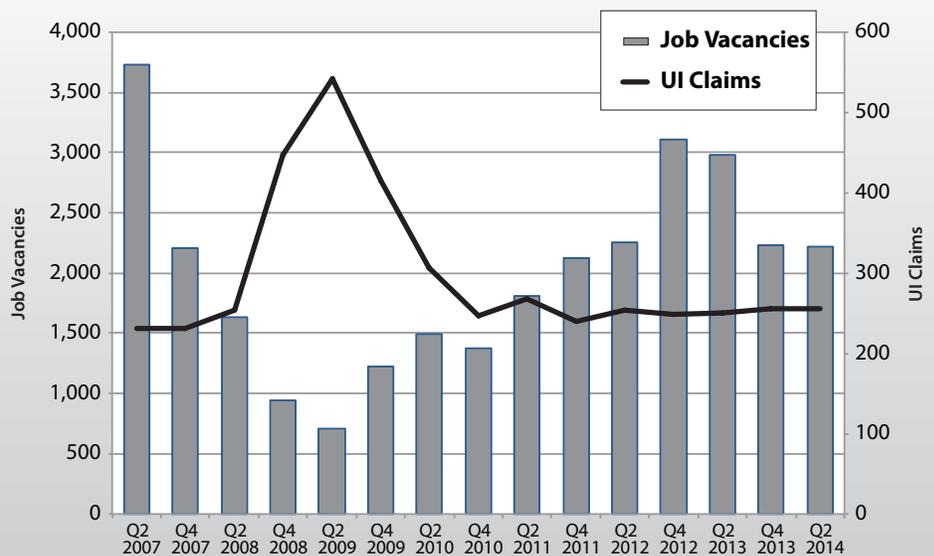
After enduring the dot-com bubble and the Great Recession, IT is once again showing signs of strength in the Twin Cities. According to DEED’s Job Vacancy Survey results, Computer Occupations have averaged 2,267 vacancies every second and fourth quarter since 2010. This is 65 percent higher than the number of vacancies reported for those second and fourth quarters in 2010. In addition to the increasing number of IT vacancies, the number of layoffs has been in steady decline. Between the second quarters of 2010 and 2014, the number of computer and mathematical workers filing for initial UI claims dropped by 15 percent in the Twin Cities.

The recent trends in IT-related vacancies and UI claims go in concert with IT-related industry growth. While IT occupations are spread throughout numerous industry sectors, notable sectors for employing IT workers

have been expanding. Table 2 showcases the high employment growth witnessed by Computer Systems Design and Related Services, the industry subsector with the highest concentration of IT-related computer occupations. Between 2010 and 2013 Twin Cities’ growth in this subsector was over twice the growth rate of all industries in the region and accounted for two-thirds of the state’s total computer systems design growth. Most growth within this subsector was in Custom Computer Programming Services, which comprises establishments primarily engaged in writing, modifying, testing, and supporting software to meet the needs of a particular customer.⁶



Computer and Mathematical Occupation Trends
Twin Cities’ Job Vacancies and Initial UI Claims, 2007–2014



Source: DEED Job Vacancy Survey and Unemployment Insurance Claims

⁵Location quotients greater than or equal to 1.20 are generally considered to be of significance.

⁶North American Industry Classification System. U.S. Census Bureau.

Looking Ahead

While the Golden Age of IT has remained elusive, recent trends and current conditions point toward a steady need for IT services. Cloud computing, or the online networking of computer storage, services, and resources, is one emerging trend that promises to bolster IT growth into the future.⁷ In Minnesota, Computer and Mathematical occupations are projected to grow by nearly 10 percent between 2012 and 2022. Total employment growth is projected to be 7 percent. Most of the IT-related growth will be with Computer Systems Analysts and Computer User Support Specialists, which are projected to add 2,227 jobs and 1,198 jobs statewide, respectively, between 2012 and 2022. With its high share and concentration of IT-related computer occupations, most of this projected growth is likely to occur in the Twin Cities.



**Table 2: Computer Systems Design Trends, 2010 – 2013
Sorted by Employment**

NAICS Code	Industry Title	Firms	Employment	Average Annual Wage	2010 – 2013 Employment Change
Minnesota					
0	Total, All Industries	164,460	2,691,838	\$50,128	5.0%
5415	Computer Systems Design	4,695	32,326	\$96,928	4,190 / 14.9%
541511	Custom Computer Programming Services	2,074	14,000	\$96,200	2,137 / 18.0%
541512	Computer Systems Design Services	1,552	11,324	\$97,136	820 / 7.8%
541519	Other Computer Related Services	982	5,649	\$92,456	1,144 / 25.4%
541513	Computer Facilities Management Services	87	1,353	\$121,316	89 / 7.0%
Seven-County Metro					
0	Total, All Industries	78,768	1,618,931	\$56,576	5.3%
5415	Computer Systems Design	2,149	26,159	\$98,644	2,879 / 12.4%
541511	Custom Computer Programming Services	857	10,798	\$97,916	1,685 / 18.5%
541512	Computer Systems Design Services	840	9,458	\$99,632	382 / 4.2%
541519	Other Computer Related Services	418	4,740	\$90,688	847 / 21.8%
541513	Computer Facilities Management Services	34	1,163	\$129,636	-34 / -2.8%

Source: Quarterly Census of Employment and Wages

⁷Csorny, p.3.

by Tim O'Neill
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Regional
Spotlight
TWIN CITIES AREA

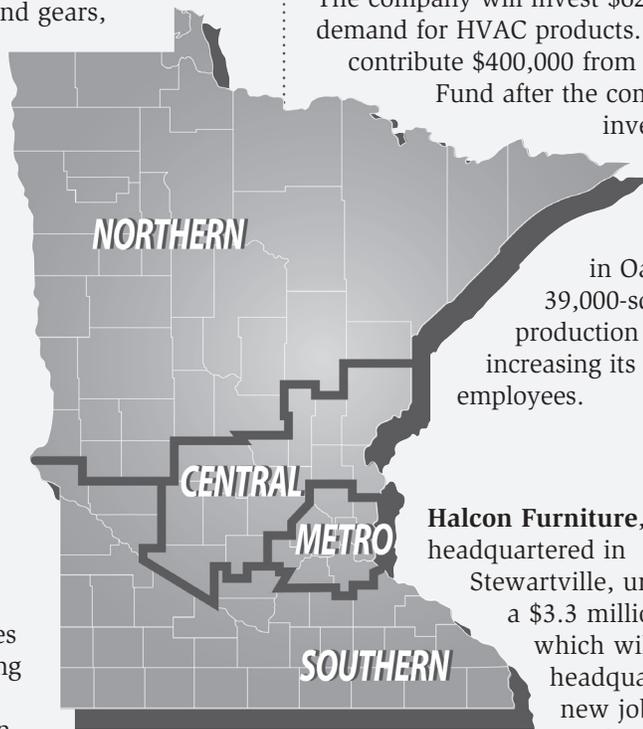
Minnesota Business Developments

Northern

Imaging technology company, **Ikronics Corp.**, announced an expansion plan to invest \$4.3

million in its manufacturing plant in Duluth adding 20 new jobs. The new project includes building a 20,000-sq. ft. addition in the Atlas Industrial Park on the city's west side. The company currently employs about 70. Ikronics Corp will receive a \$508,500 award from the Minnesota Job Creation Fund to assist with the expansion plan and creation of new jobs.

Bagley-based **TEAM Industries**, which makes drivetrains, transmissions, axles, and gears, is planning a \$7.8 million expansion at its production facility in Detroit Lakes, which will add 16 jobs and build a 22,500-sq. ft. addition at the factory. The new jobs will pay an average salary of \$14 an hour, and the company will receive \$174,900 from the Minnesota Job Creation Fund to assist with the creation of these new jobs.



Central

Park Industries, manufacturer of stone working equipment, continues to expand in St. Cloud. After adding 65 jobs in the last 18 months, the company announced an \$11 million investment plan to add 33,760-sq. ft. of production space to its St. Cloud facility, which will create another 20 to 30 jobs. DEED awarded the company \$624,000 from the Minnesota Job Creation Fund to assist with the expansion. The company will receive the funding when it meets its performance goals.

Minnesota-based **Columbia Gear** unveiled a plan to expand its precision gearing and power transmission making plant in Avon, adding 50 more jobs to its current workforce of 100. The company was awarded a \$300,000 Job Skills Partnership Program grant to assist with adding 25 apprentice positions as part of a training program in association with St. Cloud Technical and Community College.

Meadow Star Dairy announced plans to add a new dairy operation in Willmar, creating 55 jobs in the area.

Construction of the new dairy facility, which will include about 6,000 milking cows, is expected to begin soon with the dairy starting operations in the fall of 2015.

The manufacturer of heating, ventilating, and air conditioning systems,

Twin Cities Metro Area

Unison Comfort Technologies, announced an expansion plan for its facilities in North Minneapolis that will add 75 new jobs paying an average salary of \$16.90 an hour. The company will invest \$627,000 to meet the increasing demand for HVAC products. To assist, DEED will contribute \$400,000 from the Minnesota Job Creation Fund after the company meets its hiring and investment commitments.

Safe Reflections is expanding its reflective apparel solutions operation in Oakdale by adding a new 39,000-sq. ft. plant, increasing production capacity by 50 percent and increasing its workforce from 34 to 54 employees.

Halcon Furniture, headquartered in Stewartville, unveiled

a \$3.3 million expansion project, which will add 15,000 sq. ft. to its headquarter and create about 50 new jobs paying an average of \$14 per hour over the next two years.

To assist with the expansion project and creation of jobs, DEED will provide the company with \$175,000 from Minnesota Job Creation Fund. The company is also working with the city council to approve a \$400,000 tax increment finance (TIF).

Eagan-based farm, ranch, and pet supplier **Miller Manufacturing** announced a \$3 million expansion project to its distribution center in Glencoe, which will create 20 jobs. The company will receive \$185,000 from the Minnesota Job Creation Fund if the company meets its performance goals.

Jimmy John's is investing \$145,000 in a plan to open a new 1,400-sq. ft. location in Worthington. Construction began on October to build the new restaurant which is expected to create 15 to 20 jobs.

Southern

by Mohamed Mourssi Alfash

Labor Force Estimates

County/ Area

County/ Area	Labor Force			Employment			Unemployment			Rate of Unemployment		
	Nov 2014	Oct 2014	Nov 2013	Nov 2014	Oct 2014	Nov 2013	Nov 2014	Oct 2014	Nov 2013	Nov 2014	Oct 2014	Nov 2013
United States ('000s) (Seasonally adjusted) (Unadjusted)	156,397	156,278	155,284	147,287	147,283	144,443	9,110	8,995	10,841	5.8%	5.8%	7.0%
	156,297	156,616	155,046	147,666	147,936	144,775	8,630	8,680	10,271	5.5	5.5	6.6
Minnesota (Seasonally adjusted) (Unadjusted)	2,990,159	2,988,301	2,965,982	2,879,734	2,871,621	2,828,347	110,425	116,680	137,635	3.7	3.9	4.6
	2,989,326	2,997,484	2,970,009	2,894,122	2,901,615	2,846,444	95,204	95,869	123,565	3.2	3.2	4.2
Metropolitan Statistical Areas (MSA)*												
Mpls.-St. Paul MSA	1,883,063	1,886,156	1,866,466	1,826,661	1,826,475	1,789,406	56,402	59,681	77,060	3.0	3.2	4.1
Duluth-Superior MSA	143,861	143,846	145,861	137,975	138,146	137,836	5,886	5,700	8,025	4.1	4.0	5.5
Rochester MSA	104,802	105,278	104,743	102,072	102,379	101,069	2,730	2,899	3,674	2.6	2.8	3.5
St. Cloud MSA	109,745	109,932	109,044	106,118	106,558	104,554	3,627	3,374	4,490	3.3	3.1	4.1
Mankato-N Mankato MSA	60,643	60,837	59,074	59,304	59,333	57,212	1,339	1,504	1,862	2.2	2.5	3.2
Fargo-Moorhead MSA	124,586	125,132	119,955	121,844	122,320	116,932	2,742	2,812	3,023	2.2	2.2	2.5
Grand Forks MSA	54,700	54,282	54,630	53,247	52,974	53,001	1,453	1,308	1,629	2.7	2.4	3.0
Region One	51,466	51,232	51,583	49,877	49,861	49,463	1,589	1,371	2,120	3.1	2.7	4.1
Kittson	2,660	2,663	2,642	2,582	2,591	2,543	78	72	99	2.9	2.7	3.7
Marshall	5,744	5,727	5,685	5,468	5,533	5,361	276	194	324	4.8	3.4	5.7
Norman	3,498	3,511	3,541	3,379	3,402	3,397	119	109	144	3.4	3.1	4.1
Pennington	9,798	9,833	9,723	9,543	9,590	9,352	255	243	371	2.6	2.5	3.8
Polk	18,316	18,005	18,510	17,734	17,545	17,752	582	460	758	3.2	2.6	4.1
Red Lake	2,336	2,331	2,345	2,260	2,261	2,222	76	70	123	3.3	3.0	5.2
Roseau	9,114	9,162	9,137	8,911	8,939	8,836	203	223	301	2.2	2.4	3.3
Region Two	40,368	40,431	40,329	38,274	38,638	37,760	2,094	1,793	2,569	5.2	4.4	6.4
Beltrami	22,370	22,193	22,357	21,373	21,300	21,085	997	893	1,272	4.5	4.0	5.7
Clearwater	4,333	4,259	4,295	3,957	3,975	3,898	376	284	397	8.7	6.7	9.2
Hubbard	9,010	9,218	9,046	8,492	8,793	8,397	518	425	649	5.7	4.6	7.2
Lake of the Woods	2,224	2,308	2,204	2,115	2,213	2,065	109	95	139	4.9	4.1	6.3
Mahnomen	2,431	2,453	2,427	2,337	2,357	2,315	94	96	112	3.9	3.9	4.6
Region Three	165,641	166,168	168,314	158,247	159,500	158,386	7,394	6,668	9,928	4.5	4.0	5.9
Aitkin	7,163	7,185	7,293	6,795	6,894	6,819	368	291	474	5.1	4.1	6.5
Carlton	17,645	17,581	17,776	16,879	16,911	16,884	766	670	892	4.3	3.8	5.0
Cook	3,045	3,288	3,048	2,901	3,182	2,890	144	106	158	4.7	3.2	5.2
Itasca	22,202	22,293	22,540	20,960	21,235	21,020	1,242	1,058	1,520	5.6	4.7	6.7
Koochiching	6,287	6,364	6,434	5,817	5,942	5,812	470	422	622	7.5	6.6	9.7
Lake	6,003	6,242	6,163	5,794	6,048	5,831	209	194	332	3.5	3.1	5.4
St. Louis	103,296	103,215	105,060	99,101	99,288	99,130	4,195	3,927	5,930	4.1	3.8	5.6
City of Duluth	45,299	45,496	45,903	43,745	43,827	43,758	1,554	1,669	2,145	3.4	3.7	4.7
Balance of St. Louis County	57,997	57,719	59,157	55,356	55,461	55,372	2,641	2,258	3,785	4.6	3.9	6.4
Region Four	128,009	128,209	126,435	124,312	124,980	121,769	3,697	3,229	4,666	2.9	2.5	3.7
Becker	17,956	17,939	17,775	17,299	17,392	16,969	657	547	806	3.7	3.0	4.5
Clay	35,835	35,649	34,931	35,053	34,982	33,845	782	667	1,086	2.2	1.9	3.1
Douglas	21,085	21,329	20,831	20,461	20,777	20,090	624	552	741	3.0	2.6	3.6
Grant	3,273	3,276	3,234	3,163	3,185	3,097	110	91	137	3.4	2.8	4.2
Otter Tail	30,954	31,025	30,904	29,900	30,079	29,570	1,054	946	1,334	3.4	3.0	4.3
Pope	6,710	6,720	6,573	6,527	6,564	6,352	183	156	221	2.7	2.3	3.4
Stevens	6,535	6,571	6,478	6,409	6,439	6,320	126	132	158	1.9	2.0	2.4
Traverse	1,762	1,752	1,752	1,697	1,697	1,691	65	55	61	3.7	3.1	3.5
Wilkin	3,899	3,948	3,957	3,803	3,865	3,835	96	83	122	2.5	2.1	3.1
Region Five	81,881	82,582	82,468	77,698	79,328	77,237	4,183	3,254	5,231	5.1	3.9	6.3
Cass	13,533	13,719	13,703	12,705	13,131	12,663	828	588	1,040	6.1	4.3	7.6
Crow Wing	32,255	32,987	32,705	30,618	31,644	30,517	1,637	1,343	2,188	5.1	4.1	6.7
Morrison	17,394	17,315	17,330	16,482	16,641	16,292	912	674	1,038	5.2	3.9	6.0
Todd	12,538	12,458	12,532	12,052	12,063	11,955	486	395	577	3.9	3.2	4.6
Wadena	6,161	6,103	6,198	5,841	5,849	5,810	320	254	388	5.2	4.2	6.3
Region Six East	66,350	67,397	66,212	64,195	65,426	63,451	2,155	1,971	2,761	3.2	2.9	4.2
Kandiyohi	24,836	24,998	24,790	24,099	24,330	23,885	737	668	905	3.0	2.7	3.7
McLeod	19,668	20,225	19,620	19,025	19,588	18,725	643	637	895	3.3	3.1	4.6
Meeker	12,670	12,651	12,608	12,202	12,273	12,049	468	378	559	3.7	3.0	4.4
Renville	9,176	9,523	9,194	8,869	9,235	8,792	307	288	402	3.3	3.0	4.4

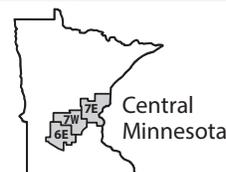
*Minneapolis-St. Paul Metropolitan Statistical Area (MSA) now includes Sherburne County in Minnesota and Pierce County in Wisconsin. St. Cloud MSA is now comprised of Benton and Stearns counties.

Numbers are unadjusted unless otherwise labeled.
Source: Department of Employment and Economic Development,
Local Area Unemployment Statistics, and North Dakota Job Service, 2014.

Labor Force Estimates

County/ Area

County/ Area	Labor Force			Employment			Unemployment			Rate of Unemployment		
	Nov 2014	Oct 2014	Nov 2013	Nov 2014	Oct 2014	Nov 2013	Nov 2014	Oct 2014	Nov 2013	Nov 2014	Oct 2014	Nov 2013
Region Six West	24,587	24,559	24,616	23,830	23,887	23,682	757	672	934	3.1%	2.7%	3.8%
Big Stone	2,638	2,650	2,656	2,554	2,583	2,564	84	67	92	3.2	2.5	3.5
Chippewa	7,205	7,180	7,211	6,993	6,981	6,940	212	199	271	2.9	2.8	3.8
Lac Qui Parle	4,053	4,041	4,053	3,929	3,930	3,904	124	111	149	3.1	2.7	3.7
Swift	5,121	5,125	5,156	4,950	4,982	4,933	171	143	223	3.3	2.8	4.3
Yellow Medicine	5,570	5,563	5,540	5,404	5,411	5,341	166	152	199	3.0	2.7	3.6
Region Seven East	83,961	83,322	83,346	80,029	80,132	78,708	3,932	3,190	4,638	4.7	3.8	5.6
Chisago	28,452	28,297	28,147	27,368	27,370	26,819	1,084	927	1,328	3.8	3.3	4.7
Isanti	20,810	20,635	20,507	19,974	19,975	19,573	836	660	934	4.0	3.2	4.6
Kanabec	8,090	7,976	8,030	7,520	7,548	7,400	570	428	630	7.0	5.4	7.8
Mille Lacs	12,243	12,098	12,209	11,532	11,529	11,370	711	569	839	5.8	4.7	6.9
Pine	14,366	14,316	14,453	13,635	13,710	13,546	731	606	907	5.1	4.2	6.3
Region Seven West	229,877	229,356	227,762	221,809	222,255	217,921	8,068	7,101	9,841	3.5	3.1	4.3
Benton	22,778	22,721	22,631	21,900	21,991	21,577	878	730	1,054	3.9	3.2	4.7
Sherburne	49,679	49,434	49,188	47,832	47,834	46,871	1,847	1,600	2,317	3.7	3.2	4.7
Stearns	86,967	87,211	86,413	84,218	84,567	82,977	2,749	2,644	3,436	3.2	3.0	4.0
Wright	70,453	69,990	69,530	67,859	67,863	66,496	2,594	2,127	3,034	3.7	3.0	4.4
Region Eight	69,311	69,465	69,085	67,606	67,133	66,840	1,705	2,332	2,245	2.5	3.4	3.2
Cottonwood	6,449	6,253	6,478	6,268	5,752	6,236	181	501	242	2.8	8.0	3.7
Jackson	7,620	7,819	7,464	7,457	7,441	7,268	163	378	196	2.1	4.8	2.6
Lincoln	3,470	3,485	3,436	3,376	3,402	3,324	94	83	112	2.7	2.4	3.3
Lyon	15,090	15,137	15,049	14,701	14,737	14,550	389	400	499	2.6	2.6	3.3
Murray	5,985	6,006	5,917	5,822	5,845	5,731	163	161	186	2.7	2.7	3.1
Nobles	11,383	11,410	11,419	11,127	11,083	11,058	256	327	361	2.2	2.9	3.2
Pipestone	5,673	5,638	5,693	5,558	5,522	5,522	115	116	171	2.0	2.1	3.0
Redwood	7,935	7,973	8,001	7,696	7,724	7,670	239	249	331	3.0	3.1	4.1
Rock	5,706	5,744	5,628	5,601	5,627	5,481	105	117	147	1.8	2.0	2.6
Region Nine	133,702	134,665	132,258	129,886	130,602	127,170	3,816	4,063	5,088	2.9	3.0	3.8
Blue Earth	40,319	40,439	39,276	39,373	39,392	37,984	946	1,047	1,292	2.3	2.6	3.3
Brown	15,454	15,474	15,588	15,024	15,048	14,979	430	426	609	2.8	2.8	3.9
Faribault	7,244	7,416	7,216	6,969	7,145	6,876	275	271	340	3.8	3.7	4.7
Le Sueur	15,274	15,353	14,891	14,658	14,820	14,119	616	533	772	4.0	3.5	5.2
Martin	10,454	10,602	10,644	10,122	10,137	10,200	332	465	444	3.2	4.4	4.2
Nicollet	20,324	20,398	19,798	19,931	19,941	19,228	393	457	570	1.9	2.2	2.9
Sibley	9,460	9,653	9,528	9,200	9,397	9,175	260	256	353	2.7	2.7	3.7
Waseca	9,582	9,733	9,733	9,234	9,377	9,272	348	356	461	3.6	3.7	4.7
Watonwan	5,591	5,597	5,584	5,375	5,345	5,337	216	252	247	3.9	4.5	4.4
Region Ten	273,065	274,793	272,937	265,299	266,726	262,630	7,766	8,067	10,307	2.8	2.9	3.8
Dodge	11,086	11,130	11,102	10,780	10,813	10,674	306	317	428	2.8	2.8	3.9
Fillmore	11,412	11,394	11,259	11,032	11,058	10,837	380	336	422	3.3	2.9	3.7
Freeborn	16,150	16,310	16,292	15,580	15,740	15,557	570	570	735	3.5	3.5	4.5
Goodhue	25,605	25,876	25,438	24,848	25,083	24,420	757	793	1,018	3.0	3.1	4.0
Houston	10,732	10,623	10,694	10,316	10,291	10,212	416	332	482	3.9	3.1	4.5
Mower	21,267	21,361	21,325	20,703	20,759	20,567	564	602	758	2.7	2.8	3.6
Olmsted	82,032	82,431	81,947	79,931	80,171	79,145	2,101	2,260	2,802	2.6	2.7	3.4
City of Rochester	59,937	60,239	59,897	58,346	58,521	57,773	1,591	1,718	2,124	2.7	2.9	3.5
Rice	32,347	32,590	32,383	31,324	31,504	30,988	1,023	1,086	1,395	3.2	3.3	4.3
Steele	21,729	22,168	21,706	21,157	21,577	20,938	572	591	768	2.6	2.7	3.5
Wabasha	11,684	11,717	11,693	11,361	11,395	11,250	323	322	443	2.8	2.7	3.8
Winona	29,021	29,193	29,098	28,267	28,335	28,042	754	858	1,056	2.6	2.9	3.6
Region Eleven	1,641,108	1,645,303	1,627,837	1,593,059	1,593,149	1,561,063	48,049	52,154	66,774	2.9	3.2	4.1
Anoka	192,114	192,105	190,396	185,980	185,991	182,245	6,134	6,114	8,151	3.2	3.2	4.3
Carver	51,860	51,885	51,357	50,354	50,357	49,343	1,506	1,528	2,014	2.9	2.9	3.9
Dakota	234,513	235,049	232,513	227,905	227,918	223,327	6,608	7,131	9,186	2.8	3.0	4.0
Hennepin	672,825	675,041	667,686	653,276	653,312	640,154	19,549	21,729	27,532	2.9	3.2	4.1
City of Bloomington	49,551	49,658	49,208	48,159	48,162	47,192	1,392	1,496	2,016	2.8	3.0	4.1
City of Minneapolis	219,527	220,449	218,138	212,825	212,837	208,551	6,702	7,612	9,587	3.1	3.5	4.4
Ramsey	277,436	278,508	275,524	269,132	269,147	263,727	8,304	9,361	11,797	3.0	3.4	4.3
City of St. Paul	147,905	148,559	147,085	143,198	143,206	140,323	4,707	5,353	6,762	3.2	3.6	4.6
Scott	76,714	76,787	75,969	74,596	74,600	73,098	2,118	2,187	2,871	2.8	2.8	3.8
Washington	135,646	135,928	134,392	131,816	131,824	129,169	3,830	4,104	5,223	2.8	3.0	3.9



Industrial Analysis

Overview

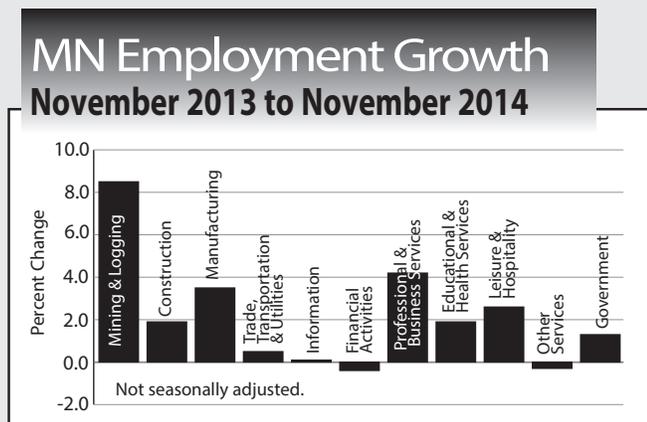
Seasonally adjusted employment in Minnesota showed strong growth in November, with the state adding 6,600 jobs (0.2 percent) over October estimates. This marks the fourth straight month of seasonally adjusted increases in the state. Supersectors with the most dramatic monthly growth included Financial Activities (up 3,100 or 1.7 percent), Professional and Business Services (up 1,700, 0.5 percent), Leisure and Hospitality (6,100, 2.4 percent) and Government (1,700, 0.4 percent). Significant declines occurred in Construction (down 3,500, 3.1 percent) and Trade, Transportation, and Utilities (down 3,400, 0.7 percent). On an annual basis Minnesota has added 51,065 jobs (1.8 percent) since November 2013. Growth continues to be spread among a mix of industries, although in a change from October estimates, Other Services (down 391 or 0.3 percent) joined Financial Activities (down 795 or 0.4 percent) as the only supersectors to lose jobs on the year. Supersectors to add a large number of employees included Manufacturing (up 10,964, 3.5 percent), Professional and Business Services (up 14,662, 4.2 percent), Educational and Health Services (up 9,620, 1.9 percent), and Leisure and Hospitality (up 6,248, 2.6 percent).

Mining and Logging

Employment grew in November, adding 200 (2.7 percent) over October estimates for a total of 7,700 jobs. Mining and Logging is also performing well on a yearly basis, up 601 jobs (8.5 percent) since November 2013.

Construction

Seasonally adjusted employment declined in November, dropping 3,500 jobs (3.1 percent) from October estimates. This decline is likely in part from the earlier arrival of winter



Source: Department of Employment and Economic Development, Current Employment Statistics, 2014.

weather this year, as the industry is particularly susceptible to seasonal effects. Annually, Construction has added 2,060 jobs (1.9 percent) with growth in Specialty Trade Contractors (up 3,192, 4.6 percent), Heavy and Civil Engineering Construction (up 1,158, 7.1 percent), and Residential Building Construction (up 561, 5.1 percent). Construction of Buildings employment in general, however, is down 2,290 (9.3 percent) despite the growth in Residential Building Construction.

Manufacturing

Employment increased by 600 jobs (0.2 percent) over October estimates with all of that growth coming in the Durable Goods sector (up 1,100, 0.5 percent). On the other side of the industry, Nondurable Goods Manufacturing shed 500 jobs (0.4 percent) in November. Annually, Manufacturing added 10,964 jobs (3.5 percent). Growth followed a similar pattern to the monthly changes, with Durable Goods adding 10,388 jobs (5.3 percent) which comprised most of the supersector's annual growth. The Durable Goods component sector that added the most jobs was once again Fabricated Metal Product Manufacturing which is up 2,065 (4.9 percent) for the year. The Nondurable Goods Manufacturing sector added 576 jobs (0.5 percent) for the year.

Trade, Transportation, and Utilities

Trade, Transportation, and Utilities employment was down 3,400 (0.7 percent) in November, with job losses in Wholesale Trade (down 1,700 or 1.3 percent) and Retail Trade (down 2,500 or 0.9 percent) swamping gains in Transportation, Warehousing, and Utilities which added 800 jobs (0.8 percent) in November. Annually, the supersector has added 2,440 jobs (0.5 percent). Most of that increase has come in Transportation, Warehousing, and Utilities which is up 2,877 jobs (3.0 percent) with its component sectors Utilities (up 411 jobs or 3.1 percent) and Transportation and Warehousing (up 2,466 or 3 percent) showing significant annual job gains.

Information

Employment in the Information supersector dropped slightly in November, shedding 200 jobs (0.4 percent) on the month. Employment in the supersector is largely static for the year, up just 37 jobs (0.1 percent) over November 2013. Once again, the two published component sectors have lost employment, as Telecommunications is down 332 jobs (2.5 percent) and Publishing Industries (except Internet) is down 715 (3.4 percent).

*Over-the-year data are not seasonally adjusted because of small changes in seasonal adjustment factors from year to year. Also, there is no seasonality in over-the-year changes.

Financial Activities

Seasonally adjusted employment reversed course in November, adding 3,100 jobs (1.7 percent). This is the first monthly increase of more than 100 jobs in the supersector since March. Both component sectors contributed to the growth, with Finance and Insurance adding 1,300 jobs (0.9 percent) and Real Estate and Rental and Leasing adding 1,800 (4.5 percent). The supersector is also making progress on an over-the-year basis. It was down just 795 jobs (0.4 percent) from November 2013, compared to a decline of 3,400 jobs from October 2013 to October 2014.

Professional and Business Services

The supersector added 1,700 jobs (0.5 percent) in November, with increases in Administrative and Support and Waste Management and Remediation Services (up 2,100 or 1.6 percent) overcoming smaller job losses in Professional, Scientific, and Technical Services and on Management of Companies and Enterprises. For the year the supersector has added 8,338 jobs (4.1 percent). The largest employment growth occurred in the Administrative and Support and Waste Management and Remediation Services sector (up 4,854, or 3.6 percent) with most of that increase coming from Services to Buildings and Dwellings (up 2,987, 10.5 percent).

Educational and Health Services

Employment in Educational and Health Services grew in November, adding 1,300 jobs (0.3 percent) over October estimates. The increase was split proportionally between the component sectors, with Educational Services adding 200 jobs and Health Care and Social Assistance adding 1,100. Annually, Educational and Health Services has added 9,620 jobs (1.9 percent) with Educational Services growing by 3,402 jobs (4.8 percent) and Health Care and Social Assistance adding 6,218 (1.4 percent).

Leisure and Hospitality

Employment in Leisure and Hospitality increased sharply in November as the supersector added 6,100 jobs (2.4 percent) seasonally adjusted. Accommodation and Food Services had the lion's share of that growth, adding 5,000 jobs (2.3 percent), although Arts, Entertainment, and Recreation also added 1,100 (2.8 percent) for the month. On an annual basis, employment was up 6,248 (2.6 percent). Nearly all of that

growth came from Accommodation and Food Service which added 6,233 jobs (3.0 percent) thanks to strong employment growth in Food Services and Drinking Places (up 4,500, or 2.5 percent) and Limited-Service Eating Places (up 3,534, or 4.7 percent).

Other Services

Employment in the Other Services supersector shrank by 1,000 jobs (0.8 percent) in November. This drop came on the heels of two consecutive months of dramatic growth. Annually, Other Services has lost 391 jobs (0.3 percent), with most of that decline coming in Personal and Laundry Services (down 350 jobs, 1.2 percent).

Government

Government employment was up 1,700 jobs (0.4 percent) in November, with growth in all three component sectors. On the year, Government employers added 5,619 jobs (1.3 percent) with a large majority of them coming from Local Government (up 5,224 or 1.8 percent).

by Nick Dobbins

Seasonally Adjusted Nonfarm Employment

In 1,000's

Industry	Nov 2014	Oct 2014	Sept 2014
Total Nonagricultural	2,854.0	2,847.4	2,837.5
Goods-Producing	436.5	439.2	435.7
Mining and Logging	7.7	7.5	7.4
Construction	107.8	111.3	110.5
Manufacturing	321.0	320.4	317.8
Service-Providing	2,417.5	2,408.2	2,401.8
Trade, Transportation, and Utilities	516.4	519.8	514.1
Information	54.7	54.9	54.8
Financial Activities	180.7	177.6	178.3
Professional and Business Services	359.3	357.6	358.9
Educational and Health Services	508.2	506.9	501.8
Leisure and Hospitality	258.9	252.8	255.4
Other Services	118.9	119.9	118.7
Government	420.4	418.7	419.8

Source: Department of Employment and Economic Development
Current Employment Statistics, 2014.

Regional Analysis

Minneapolis-St. Paul-Bloomington Metropolitan Statistical Area (MSA)

Employment climbed in November with 3,673 additional jobs in the metro over the month. The increase was entirely from a spike in employment among service providers, as good producers lost 3,944 jobs (1.5 percent). Trade, Transportation, and Utilities led the way with an increase of 5,633 jobs (1.8 percent), thanks to a spike of 5,220 (3.0 percent) in Retail Trade. Other notable job gainers included Financial Activities, up 1,802 jobs (1.3 percent), and Government which added 2,666 jobs (1.1 percent). The sharpest decline came in Leisure and Hospitality which lost 3,901 jobs (2.3 percent). For the year, the MSP metro has added 38,523 jobs (2.1 percent). The biggest annual job loss came in Mining, Logging, and Construction (down 1,452, 2.1 percent). The most dramatic growth occurred in Manufacturing (up 9,110 or 5.0 percent) and Professional and Business Services (up 11,834, 4.3 percent).

Duluth-Superior MSA

The MSA shed 136 jobs (0.1 percent) in November as winter declines began to set in. The largest losses were in Leisure and Hospitality (down 608, 4.8 percent) and Mining, Logging, and Construction (down 381, 4.1 percent). Trade, Transportation, and Utilities added 638 jobs (2.6 percent) as Retail Trade employment grew by 428 (2.7 percent) for the holiday season. Other supersectors to add jobs included Educational and Health Services (up 118 or 0.4 percent) and Government (up 148 or 0.6 percent) on the strength of an additional 180 jobs in Local Government). Employment has also declined over the year, down 331

jobs (0.2 percent) since November 2013. The annual decline is largely caused by a dramatic drop in Leisure and Hospitality employment, as the supersector was down 1,609 jobs (11.7 percent) over the year. This supersector showed a similar over-the-year decline in October.

Rochester MSA

Employment was up very slightly in November, adding 95 jobs (0.1 percent) over October estimates. Along with the expected Trade, Transportation, and Utilities increase (up 628 jobs or 3.8 percent), Government added 122 jobs (1.1 percent), and Leisure and Hospitality employment was up 66 (0.7 percent). For the year, Rochester added 842 jobs (0.8 percent). Growth in Manufacturing (up 250, 2.5 percent), Trade, Transportation, and Utilities (up 314, 1.8 percent), Educational and Health Services (up 319, 0.7 percent), and other supersectors easily overcame job losses in Mining, Logging, and Construction (down 249, 6.6 percent), Financial Activities (down 47, 1.8 percent), and Government (down 38, 0.3 percent).

St. Cloud MSA

The MSA lost 657 jobs (0.6 percent) in November. The strong seasonal increase in Trade, Transportation, and Utilities (up 355, 1.7 percent), along with growth in Government (up 67 jobs, 0.4 percent) and Professional and Business Services (up 13, 0.1 percent) was not enough to overcome the losses in every other supersector. Largest declines came in Educational and Health Services (down 373, 1.8 percent), Leisure and Hospitality (down 200, 2.1 percent), and Manufacturing (down 110, 0.7 percent).

Annually, St. Cloud was up 1,400 jobs (1.3 percent). The situation is nearly the opposite of the monthly picture, with losses in Government (down 638, 3.9 percent) and Trade, Transportation, and Utilities (down 29, 0.1 percent), as well as Information (down 83, 4.9 percent) trumped by gains in every other supersector. The most dramatic proportional annual growth occurred in Mining, Logging, and Construction which added 795 jobs (15.4 percent).

Mankato-North Mankato MSA

Employment grew again in November, adding 269 jobs (0.5 percent) over October estimates. The growth came entirely from Government employers (up 278, 3.0 percent) as Private employment was virtually flat (down 9, 0.0 percent). Annually, the Mankato metro added 2,019 jobs (3.6 percent) with 1,790 of those jobs coming from Private employers. Service providers added 1,638 jobs (3.6 percent) while goods producers grew by 381 (3.8 percent).

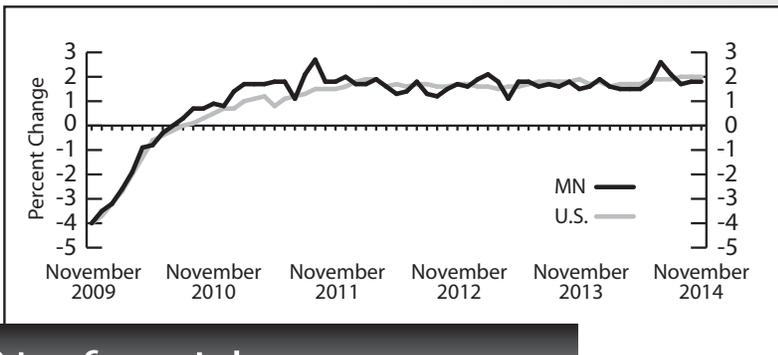
Fargo-Moorhead MSA

The MSA added 674 jobs (0.5 percent) in November. Accompanying Trade, Transportation, and Utilities (up 619, 2.0 percent) with significant employment gains on the month were Leisure and Hospitality (up 381 or 2.8 percent) and Educational and Health Services (up 224, 1.0 percent), along with a handful of supersectors with smaller growth. Largest losses came in Mining, Logging, and Construction (down 411, 3.9 percent) and Professional and Business Services (down 193, 1.2 percent). For the year the metro added 5,584 jobs (4.1 percent) with the only losses coming in the Other Services supersector which shed just two jobs.

Grand Forks-East Grand Forks MSA

Employment was up 542 (0.9 percent) in November, following the pattern of significant job losses in Mining, Logging, and Construction (down 170, 4.6 percent) and gains in Trade, Transportation, and Utilities (up 394, 3.1 percent). For the year, the metro added 496 jobs (0.9 percent) despite losses of 182 (1.2 percent) in Government and 254 (4.0 percent) in Leisure and Hospitality.

Source: Department of Employment and Economic Development, Current Employment Statistics, 2014; Bureau of Labor Statistics, U.S. Department of Labor, Current Employment Statistics, 2014.



Total Nonfarm Jobs U.S. and MN over-the-year percent change

by Nick Dobbins

Employer Survey of Minnesota Nonfarm Payroll Jobs, Hours and Earnings

Numbers are unadjusted.

Note: State, regional and local estimates from past months (for all tables pages 11-13) may be revised from figures previously published.

Industry

Industry	Jobs* (Thousands)			Percent Change: From**		Production Workers Hours and Earnings					
	Nov 2014	Oct 2014	Nov 2013	Oct 2014	Nov 2013	Average Weekly Earnings		Average Weekly Hours		Average Hourly Earnings	
						Nov 2014	Nov 2013	Nov 2014	Nov 2013	Nov 2014	Nov 2013
TOTAL NONFARM WAGE AND SALARY	2,869.3	2,876.8	2,818.2	-0.3%	1.8%	—	—	—	—	—	—
GOODS-PRODUCING	440.8	451.3	427.2	-2.3	3.2	—	—	—	—	—	—
Mining and Logging	7.7	7.8	7.1	-1.5	8.5	—	—	—	—	—	—
Construction	112.2	122.4	110.2	-8.3	1.9	—	—	—	—	—	—
Specialty Trade Contractors	72.4	78.2	69.2	-7.5	4.6	\$1,079.93	\$1,201.46	35.7	39.6	\$30.25	\$30.34
Manufacturing	321.0	321.2	310.0	-0.1	3.5	820.35	831.17	41.6	41.6	19.72	19.98
Durable Goods	206.7	206.7	196.3	0.0	5.3	817.16	837.67	42.1	41.8	19.41	20.04
Wood Product Manufacturing	10.6	10.6	10.7	-0.6	-1.0	—	—	—	—	—	—
Fabricated Metal Production	43.9	43.8	41.8	0.3	4.9	—	—	—	—	—	—
Machinery Manufacturing	31.8	31.8	31.8	-0.1	-0.1	—	—	—	—	—	—
Computer and Electronic Product	44.9	44.7	44.7	0.4	0.4	—	—	—	—	—	—
Navigational, Measuring, Electromedical and Control	24.9	24.8	24.5	0.0	1.3	—	—	—	—	—	—
Transportation Equipment	12.1	12.0	11.4	0.8	6.6	—	—	—	—	—	—
Medical Equipment and Supplies Manufacturing	15.3	15.3	15.2	0.1	0.8	—	—	—	—	—	—
Nondurable Goods	114.3	114.5	113.7	-0.2	0.5	827.41	819.47	40.9	41.2	20.23	19.89
Food Manufacturing	46.2	46.3	46.5	-0.3	-0.7	—	—	—	—	—	—
Paper Manufacturing	32.4	32.4	33.0	-0.1	-2.0	—	—	—	—	—	—
Printing and Related	23.5	23.5	23.6	0.0	-0.6	—	—	—	—	—	—
SERVICE-PROVIDING	2,428.4	2,425.4	2,391.0	0.1	1.6	—	—	—	—	—	—
Trade, Transportation, and Utilities	525.4	519.8	523.0	1.1	0.5	—	—	—	—	—	—
Wholesale Trade	131.8	133.2	132.5	-1.0	-0.5	1,006.40	1,011.60	39.7	39.5	25.35	25.61
Retail Trade	296.4	291.0	296.2	1.8	0.1	408.98	383.88	28.6	28	14.30	13.71
Motor Vehicle and Parts	33.9	33.9	32.2	-0.2	5.0	—	—	—	—	—	—
Building Material and Garden Equipment	24.6	25.5	25.3	-3.4	-2.9	—	—	—	—	—	—
Food and Beverage Stores	51.7	51.0	51.8	1.4	-0.3	—	—	—	—	—	—
Gasoline Stations	23.8	23.6	23.6	0.6	0.8	—	—	—	—	—	—
General Merchandise Stores	64.4	60.9	66.1	5.7	-2.6	305.28	306.42	28.8	29.1	10.60	10.53
Transportation, Warehouse, Utilities	97.2	95.6	94.4	1.7	3.0	—	—	—	—	—	—
Transportation and Warehousing	83.7	82.2	81.2	1.8	3.0	652.96	608.47	35.2	35.5	18.55	17.14
Information	54.6	54.6	54.6	0.1	0.1	852.40	792.27	35.8	33.8	23.81	23.44
Publishing Industries	20.5	20.5	21.2	-0.3	-3.4	—	—	—	—	—	—
Telecommunications	13.1	13.1	13.4	-0.2	-2.5	—	—	—	—	—	—
Financial Activities	179.6	178.0	180.4	0.9	-0.4	—	—	—	—	—	—
Finance and Insurance	138.3	137.8	140.4	0.4	-1.5	876.15	968.24	36.1	36.4	24.27	26.60
Credit Intermediation	53.2	53.1	54.9	0.3	-3.1	712.49	780.44	35.5	35.8	20.07	21.80
Securities, Commodity Contracts, and Other	18.3	18.2	18.5	0.3	-1.0	—	—	—	—	—	—
Insurance Carriers and Related	66.7	66.3	66.6	0.5	0.1	—	—	—	—	—	—
Real Estate and Rental and Leasing	41.4	40.2	40.0	2.9	3.4	—	—	—	—	—	—
Professional and Business Services	361.4	363.8	346.7	-0.7	4.2	—	—	—	—	—	—
Professional, Scientific, and Technical Services	142.6	142.7	134.3	0.0	6.2	—	—	—	—	—	—
Legal Services	19.0	19.0	18.8	0.0	1.1	—	—	—	—	—	—
Accounting, Tax Preparation	15.7	15.8	14.5	-0.4	8.6	—	—	—	—	—	—
Computer Systems Design	33.7	33.6	32.6	0.3	3.5	—	—	—	—	—	—
Management of Companies and Enterprises	78.9	79.0	77.4	-0.2	1.9	—	—	—	—	—	—
Administrative and Support Services	139.9	142.1	135.0	-1.6	3.6	—	—	—	—	—	—
Educational and Health Services	511.8	509.9	502.2	0.4	1.9	—	—	—	—	—	—
Educational Services	74.2	72.9	70.8	1.7	4.8	—	—	—	—	—	—
Health Care and Social Assistance	437.6	437.0	431.4	0.1	1.4	—	—	—	—	—	—
Ambulatory Health Care	143.2	143.1	139.1	0.1	3.0	1,252.81	1,218.35	35.4	34.8	35.39	35.01
Offices of Physicians	67.9	67.7	66.4	0.3	2.3	—	—	—	—	—	—
Hospitals	104.9	104.7	105.0	0.2	-0.1	—	—	—	—	—	—
Nursing and Residential Care Facilities	106.7	106.6	106.9	0.1	-0.2	436.00	416.10	29.4	29.7	14.83	14.01
Social Assistance	82.8	82.6	80.5	0.2	3.0	—	—	—	—	—	—
Leisure and Hospitality	248.3	254.7	242.1	-2.5	2.6	—	—	—	—	—	—
Arts, Entertainment, and Recreation	35.4	39.5	35.3	-10.5	0.0	—	—	—	—	—	—
Accommodation and Food Services	212.9	215.2	206.7	-1.0	3.0	—	—	—	—	—	—
Food Services and Drinking Places	187.6	188.9	183.1	-0.7	2.5	257.52	237.50	21.3	21.3	12.09	11.15
Other Services	118.7	119.6	119.1	-0.7	-0.3	—	—	—	—	—	—
Religious, Grantmaking, Civic, Professional Organizations	69.6	70.3	69.6	-0.9	0.0	—	—	—	—	—	—
Government	428.5	425.1	422.9	0.8	1.3	—	—	—	—	—	—
Federal Government	31.1	31.1	31.1	0.0	-0.1	—	—	—	—	—	—
State Government	103.8	103.3	103.4	0.5	0.4	—	—	—	—	—	—
State Government Education	65.8	65.0	65.5	1.1	0.4	—	—	—	—	—	—
Local Government	293.6	290.7	288.4	1.0	1.8	—	—	—	—	—	—
Local Government Education	145.5	143.4	144.2	1.4	0.9	—	—	—	—	—	—

Note: Not all industry subgroups are shown for every major industry category.

* Totals may not add because of rounding.

** Percent change based on unrounded numbers.

Source: Department of Employment and Economic Development, Current Employment Statistics, 2014.

Employer Survey of Twin Cities Nonfarm Payroll Jobs, Hours and Earnings

Numbers are unadjusted.

Note: State, regional and local estimates from past months (for all tables pages 11-13) may be revised from figures previously published.

Industry	Jobs*			Percent Change		Production Workers Hours and Earnings					
	(Thousands)			From**		Average Weekly Earnings		Average Weekly Hours		Average Hourly Earnings	
	Nov 2014	Oct 2014	Nov 2013	Oct 2014	Nov 2013	Nov 2014	Nov 2013	Nov 2014	Nov 2013	Nov 2014	Nov 2013
TOTAL NONFARM WAGE AND SALARY	1,862.0	1,858.3	1,823.5	0.2%	2.1%	—	—	—	—	—	—
GOODS-PRODUCING	259.6	263.5	251.9	-1.5	3.0	—	—	—	—	—	—
Mining, Logging, and Construction	66.5	70.9	68.0	-6.2	-2.1	—	—	—	—	—	—
Construction of Buildings	15.9	16.1	14.7	-0.9	8.1	—	—	—	—	—	—
Specialty Trade Contractors	46.1	48.8	45.2	-5.5	2.1	\$1,104.59	\$1,277.14	34.9	39.2	\$31.65	\$32.58
Manufacturing	193.1	192.6	183.9	0.2	5.0	856.55	836.77	41.2	40.6	20.79	20.61
Durable Goods	133.7	133.5	125.7	0.1	6.3	833.38	869.03	41.4	41.7	20.13	20.84
Fabricated Metal Production	29.0	28.9	27.9	0.3	3.7	—	—	—	—	—	—
Machinery Manufacturing	19.5	19.6	19.3	-0.6	0.9	—	—	—	—	—	—
Computer and Electronic Product	35.7	35.5	35.3	0.5	1.1	—	—	—	—	—	—
Navigational, Measuring, Electromedical and Control	23.5	23.5	23.0	0.0	2.3	—	—	—	—	—	—
Medical Equipment and Supplies Manufacturing	14.3	14.3	14.1	0.2	1.5	—	—	—	—	—	—
Nondurable Goods	59.4	59.1	58.2	0.4	2.0	902.32	778.56	40.7	38.6	22.17	20.17
Food Manufacturing	13.6	13.4	13.4	0.9	1.1	—	—	—	—	—	—
Printing and Related	15.1	15.1	15.1	-0.2	0.0	—	—	—	—	—	—
SERVICE-PROVIDING	1,602.4	1,594.8	1,571.6	0.5	2.0	—	—	—	—	—	—
Trade, Transportation, and Utilities	326.1	320.4	325.5	1.8	0.2	—	—	—	—	—	—
Wholesale Trade	80.2	80.8	82.9	-0.8	-3.3	1,002.34	1,040.69	39.4	39.6	25.44	26.28
Merchant Wholesalers - Durable Goods	43.5	44.1	44.1	-1.4	-1.5	—	—	—	—	—	—
Merchant Wholesalers - Nondurable Goods	24.6	24.7	24.5	-0.2	0.4	—	—	—	—	—	—
Retail Trade	180.7	175.5	180.0	3.0	0.4	431.80	367.55	29.8	28.1	14.49	13.08
Food and Beverage Stores	29.6	29.0	29.7	2.1	-0.4	—	—	—	—	—	—
General Merchandise Stores	40.2	37.8	40.7	6.2	-1.4	311.69	319.96	29.6	30.1	10.53	10.63
Transportation, Warehouse, Utilities	65.2	64.1	62.7	1.7	4.1	—	—	—	—	—	—
Utilities	7.9	7.8	7.7	0.3	2.1	—	—	—	—	—	—
Transportation and Warehousing	57.4	56.3	55.0	1.9	4.4	778.91	792.53	40.4	44.3	19.28	17.89
Information	38.5	38.6	38.7	-0.2	-0.5	—	—	—	—	—	—
Publishing Industries	16.4	16.4	16.7	-0.3	-2.0	—	—	—	—	—	—
Telecommunications	9.3	9.4	9.5	-0.2	-1.8	—	—	—	—	—	—
Financial Activities	142.4	140.6	141.4	1.3	0.7	—	—	—	—	—	—
Finance and Insurance	108.8	107.6	108.9	1.1	-0.1	924.86	1,119.35	34.6	37.2	26.73	30.09
Credit Intermediation	37.4	37.0	38.0	1.1	-1.6	—	—	—	—	—	—
Securities, Commodity Contracts, and Other	16.5	16.4	16.4	0.5	0.4	—	—	—	—	—	—
Insurance Carriers and Related	53.6	53.1	53.3	0.9	0.6	—	—	—	—	—	—
Real Estate and Rental and Leasing	33.6	32.9	32.5	2.0	3.4	—	—	—	—	—	—
Professional and Business Services	287.7	286.4	275.8	0.4	4.3	—	—	—	—	—	—
Professional, Scientific, and Technical Services	112.2	111.9	106.9	0.3	5.0	—	—	—	—	—	—
Legal Services	15.9	15.9	15.7	0.0	0.9	—	—	—	—	—	—
Architectural, Engineering, and Related	16.1	16.3	15.7	-1.5	2.4	—	—	—	—	—	—
Computer Systems Design	27.8	27.6	26.6	0.7	4.5	—	—	—	—	—	—
Management of Companies and Enterprises	71.5	70.9	69.4	0.8	3.0	—	—	—	—	—	—
Administrative and Support Services	104.0	103.7	99.6	0.4	4.5	—	—	—	—	—	—
Employment Services	49.9	50.5	49.8	-1.1	0.4	—	—	—	—	—	—
Educational and Health Services	312.6	311.5	303.6	0.4	3.0	—	—	—	—	—	—
Educational Services	47.2	46.4	45.0	1.7	4.7	—	—	—	—	—	—
Health Care and Social Assistance	265.5	265.1	258.6	0.1	2.7	—	—	—	—	—	—
Ambulatory Health Care	85.4	85.9	84.5	-0.5	1.2	—	—	—	—	—	—
Hospitals	61.9	61.7	61.4	0.2	0.8	—	—	—	—	—	—
Nursing and Residential Care Facilities	58.5	58.1	56.8	0.7	3.0	—	—	—	—	—	—
Social Assistance	59.7	59.4	56.0	0.4	6.6	—	—	—	—	—	—
Leisure and Hospitality	169.1	173.0	164.5	-2.3	2.8	—	—	—	—	—	—
Arts, Entertainment, and Recreation	27.1	29.6	27.3	-8.4	-0.7	—	—	—	—	—	—
Accommodation and Food Services	141.9	143.4	137.2	-1.0	3.4	284.63	266.30	22.5	22.8	12.65	11.68
Food Services and Drinking Places	129.3	130.7	124.4	-1.0	3.9	276.46	260.51	21.7	22.4	12.74	11.63
Other Services	77.6	78.5	78.9	-1.1	-1.7	—	—	—	—	—	—
Repair and Maintenance	13.3	13.5	13.6	-1.0	-1.7	—	—	—	—	—	—
Religious, Grantmaking, Civic, Professional Organizations	43.2	43.7	43.4	-1.1	-0.5	—	—	—	—	—	—
Government	248.5	245.9	243.1	1.1	2.2	—	—	—	—	—	—
Federal Government	19.9	19.7	20.1	0.6	-1.2	—	—	—	—	—	—
State Government	70.6	70.4	69.0	0.2	2.4	—	—	—	—	—	—
State Government Education	44.9	44.7	43.7	0.3	2.7	—	—	—	—	—	—
Local Government	158.1	155.7	154.0	1.5	2.6	—	—	—	—	—	—
Local Government Education	88.9	88.0	88.6	1.1	0.4	—	—	—	—	—	—

Note: Not all industry subgroups are shown for every major industry category.

* Totals may not add because of rounding.

** Percent change based on unrounded numbers.

Source: Department of Employment and Economic Development, Current Employment Statistics, 2014.

Employer Survey

Industry

TOTAL NONFARM WAGE AND SALARY

GOODS-PRODUCING

Mining, Logging, and Construction
Manufacturing

SERVICE-PROVIDING

Trade, Transportation, and Utilities
Wholesale Trade
Retail Trade
Transportation, Warehouse, Utilities
Information
Financial Activities
Professional and Business Services
Educational and Health Services
Leisure and Hospitality
Other Services
Government

Duluth-Superior MSA

Jobs % Chg. From

	Nov 2014	Oct 2014	Nov 2013	Oct 2014	Nov 2013
TOTAL NONFARM WAGE AND SALARY	134,350	134,486	134,681	-0.1%	-0.2%
GOODS-PRODUCING	16,262	16,707	15,883	-2.7	2.4
Mining, Logging, and Construction	8,875	9,256	8,466	-4.1	4.8
Manufacturing	7,387	7,451	7,417	-0.9	-0.4
SERVICE-PROVIDING	118,088	117,779	118,798	0.3	-0.6
Trade, Transportation, and Utilities	25,285	24,647	25,137	2.6	0.6
Wholesale Trade	3,138	3,140	3,117	-0.1	0.7
Retail Trade	16,080	15,652	16,022	2.7	0.4
Transportation, Warehouse, Utilities	6,067	5,855	5,998	3.6	1.2
Information	1,404	1,397	1,553	0.5	-9.6
Financial Activities	5,409	5,397	5,480	0.2	-1.3
Professional and Business Services	7,806	7,854	7,781	-0.6	0.3
Educational and Health Services	32,288	32,170	31,518	0.4	2.4
Leisure and Hospitality	12,164	12,772	13,773	-4.8	-11.7
Other Services	6,870	6,828	6,382	0.6	7.6
Government	26,862	26,714	27,174	0.6	-1.1

Rochester MSA

Jobs % Chg. From

	Nov 2014	Oct 2014	Nov 2013	Oct 2014	Nov 2013
TOTAL NONFARM WAGE AND SALARY	109,167	109,072	108,325	0.1%	0.8%
GOODS-PRODUCING	13,663	14,236	13,662	-4.0	0.0
Mining, Logging, and Construction	3,517	3,681	3,766	-4.5	-6.6
Manufacturing	10,146	10,555	9,896	-3.9	2.5
SERVICE-PROVIDING	95,504	94,836	94,663	0.7	0.9
Trade, Transportation, and Utilities	17,349	16,721	17,035	3.8	1.8
Wholesale Trade	2,329	2,318	2,284	0.5	2.0
Retail Trade	12,441	11,883	12,249	4.7	1.6
Transportation, Warehouse, Utilities	2,579	2,520	2,502	2.3	3.1
Information	1,789	1,781	1,728	0.4	3.5
Financial Activities	2,580	2,585	2,627	-0.2	-1.8
Professional and Business Services	5,548	5,745	5,548	-3.4	0.0
Educational and Health Services	44,162	44,121	43,843	0.1	0.7
Leisure and Hospitality	9,458	9,392	9,248	0.7	2.3
Other Services	3,783	3,778	3,761	0.1	0.6
Government	10,835	10,713	10,873	1.1	-0.3

Employer Survey

Industry

TOTAL NONFARM WAGE AND SALARY

GOODS-PRODUCING

Mining, Logging, and Construction
Manufacturing

SERVICE-PROVIDING

Trade, Transportation, and Utilities
Wholesale Trade
Retail Trade
Transportation, Warehouse, Utilities
Information
Financial Activities
Professional and Business Services
Educational and Health Services
Leisure and Hospitality
Other Services
Government

St. Cloud MSA

Jobs % Chg. From

	Nov 2014	Oct 2014	Nov 2013	Oct 2014	Nov 2013
TOTAL NONFARM WAGE AND SALARY	107,107	107,764	105,707	-0.6%	1.3%
GOODS-PRODUCING	21,037	21,505	20,133	-2.2	4.5
Mining, Logging, and Construction	5,949	6,307	5,154	-5.7	15.4
Manufacturing	15,088	15,198	14,979	-0.7	0.7
SERVICE-PROVIDING	86,070	86,259	85,574	-0.2	0.6
Trade, Transportation, and Utilities	21,493	21,138	21,522	1.7	-0.1
Wholesale Trade	4,275	4,364	4,272	-2.0	0.1
Retail Trade	13,684	13,327	13,730	2.7	-0.3
Transportation, Warehouse, Utilities	3,534	3,447	3,520	2.5	0.4
Information	1,618	1,630	1,701	-0.7	-4.9
Financial Activities	4,533	4,560	4,528	-0.6	0.1
Professional and Business Services	9,326	9,313	9,096	0.1	2.5
Educational and Health Services	20,497	20,870	20,059	-1.8	2.2
Leisure and Hospitality	9,540	9,740	8,968	-2.1	6.4
Other Services	3,491	3,503	3,490	-0.3	0.0
Government	15,572	15,505	16,210	0.4	-3.9

Mankato-North Mankato MSA

Jobs % Chg. From

	Nov 2014	Oct 2014	Nov 2013	Oct 2014	Nov 2013
TOTAL NONFARM WAGE AND SALARY	58,097	57,828	56,078	0.5%	3.6%
GOODS-PRODUCING	10,426	10,500	10,045	-0.7	3.8
Mining, Logging, and Construction	--	--	--	--	--
Manufacturing	--	--	--	--	--
SERVICE-PROVIDING	47,671	47,328	46,033	0.7	3.6
Trade, Transportation, and Utilities	--	--	--	--	--
Wholesale Trade	--	--	--	--	--
Retail Trade	--	--	--	--	--
Transportation, Warehouse, Utilities	--	--	--	--	--
Information	--	--	--	--	--
Financial Activities	--	--	--	--	--
Professional and Business Services	--	--	--	--	--
Educational and Health Services	--	--	--	--	--
Leisure and Hospitality	--	--	--	--	--
Other Services	--	--	--	--	--
Government	9,427	9,149	9,198	3.0	2.5

Employer Survey

Industry

TOTAL NONFARM WAGE AND SALARY

GOODS-PRODUCING

Mining, Logging, and Construction
Manufacturing

SERVICE-PROVIDING

Trade, Transportation, and Utilities
Wholesale Trade
Retail Trade
Transportation, Warehouse, Utilities
Information
Financial Activities
Professional and Business Services
Educational and Health Services
Leisure and Hospitality
Other Services
Government

Fargo-Moorhead MSA

Jobs % Chg. From

	Nov 2014	Oct 2014	Nov 2013	Oct 2014	Nov 2013
TOTAL NONFARM WAGE AND SALARY	140,784	140,110	135,200	0.5%	4.1%
GOODS-PRODUCING	20,422	20,810	18,640	-1.9	9.6
Mining, Logging, and Construction	10,102	10,513	8,472	-3.9	19.2
Manufacturing	10,320	10,297	10,168	0.2	1.5
SERVICE-PROVIDING	120,362	119,300	116,560	0.9	3.3
Trade, Transportation, and Utilities	30,814	30,195	29,879	2.1	3.1
Wholesale Trade	9,447	9,400	9,013	0.5	4.8
Retail Trade	16,287	15,695	15,953	3.8	2.1
Transportation, Warehouse, Utilities	5,080	5,100	4,913	-0.4	3.4
Information	3,307	3,293	3,280	0.4	0.8
Financial Activities	9,993	9,990	9,779	0.0	2.2
Professional and Business Services	15,988	16,181	15,676	-1.2	2.0
Educational and Health Services	22,506	22,282	21,836	1.0	3.1
Leisure and Hospitality	14,184	13,803	12,595	2.8	12.6
Other Services	5,219	5,200	5,221	0.4	0.0
Government	18,351	18,356	18,294	0.0	0.3

Grand Forks-East Grand Forks MSA

Jobs % Chg. From

	Nov 2014	Oct 2014	Nov 2013	Oct 2014	Nov 2013
TOTAL NONFARM WAGE AND SALARY	58,682	58,140	58,186	0.9%	0.9%
GOODS-PRODUCING	7,252	7,422	6,904	-2.3	5.0
Mining, Logging, and Construction	3,531	3,701	3,308	-4.6	6.7
Manufacturing	3,721	3,721	3,596	0.0	3.5
SERVICE-PROVIDING	51,430	50,718	51,282	1.4	0.3
Trade, Transportation, and Utilities	12,982	12,588	12,768	3.1	1.7
Wholesale Trade	2,055	2,044	1,990	0.5	3.3
Retail Trade	8,974	8,610	8,694	4.2	3.2
Transportation, Warehouse, Utilities	1,953	1,934	2,084	1.0	-6.3
Information	615	614	612	0.2	0.5
Financial Activities	1,711	1,726	1,735	-0.9	-1.4
Professional and Business Services	2,905	2,932	2,840	-0.9	2.3
Educational and Health Services	10,021	9,937	9,814	0.9	2.1
Leisure and Hospitality	6,149	6,110	6,403	0.6	-4.0
Other Services	2,161	2,147	2,042	0.7	5.8
Government	14,886	14,664	15,068	1.5	-1.2

Source: Department of Employment and Economic Development, Current Employment Statistics, and North Dakota Job Service, 2014.

Minnesota Economic Indicators

Highlights

The **Minnesota Index** increased 0.2 percent for the second straight month in November. Minnesota's economic expansion has slowed over the last two months according to the index, having increased by 0.3 percent each month between May and September. Job growth, however, continued at a robust pace, the unemployment rate dipped again, and average weekly manufacturing hours inched up in November. Minnesota's index in November is up 3.2 percent from a year ago, matching the 3.2 percent gain in the U.S. index since last November. Minnesota's index has, however, been advancing slower than the U.S. index over the last few months.

Minnesota's economic expansion is now five years old with most signs pointing to another year of solid economic growth for 2015. The Minnesota Index is up 15.2 percent over the last five years which exceeds the 13.9 percent U.S. index increase over the same time period. The 15.2 percent gain is substantially larger than the 10.6 percent jump experienced during the six-year expansion from 2002 to 2008. Minnesota's index increased 10.6 percent between 2002 and 2008 while the U.S. index increased by 13.9 percent over the same span.

Adjusted **Wage and Salary Employment** increased sharply for the fourth month in a row in November with 6,600 jobs added. November's job report might have been even stronger if not for the early winter weather which probably explains most of the 3,600 jobs lost in Construction. The drop in Construction

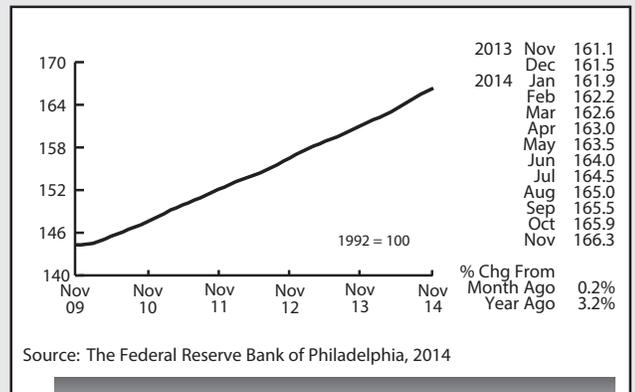
jobs dragged goods producing employment into the negative for the first time in four months. Significant job loss occurred in Other Services and in Trade, Transportation, and Utilities. Hiring was strong in Leisure and Hospitality, Financial Activities, Professional and Business Services, Government, and Educational and Health Services. Manufacturing employment was up for the fifth straight month.

Minnesota's unadjusted job growth over the year stayed at 1.8 percent which was slightly below the 2.0 percent gain recorded nationally. Minnesota's over-the-year job growth has now lagged behind national growth for three consecutive months.

Minnesota's adjusted online **Help-Wanted Ads** jumped to a record high of 128,100 in November, topping the previous high of 125,500 in August. The level of job advertising in Minnesota climbed 5.8 percent over the month, outdoing the 3.3 percent national increase. Help-wanted ads online were up 12.3 percent over the year compared to 7.2 percent for the U.S. Minnesota's share of job advertising (2.4 percent) continues to exceed the state's share of total employment (2.0 percent).

Minnesota's **Purchasing Managers' Index (PMI)** slipped for the fourth time in five months in November, reaching its lowest reading since January. November's 58.0 reading still points to solid economic growth for the state during the first half of 2015, but the pace will likely be slower than the second half of 2014. The Mid-America

Index, a leading economic indicator for a nine-state region stretching from North Dakota to Arkansas and including Minnesota, dipped slightly to 51.3 percent in November while the corresponding national index slipped to 58.7. November was the first time in 12 months that Minnesota's index was below the U.S. index.



Minnesota Index

Adjusted **Manufacturing Hours** rose for the first time in three months, inching up to 41.6 hours. While November's factory workweek is down from the 41.9 hour workweek experienced a few months ago, Minnesota manufacturing hours remain healthy by historical standards. **Manufacturing Earnings** tailed off for the third month in a row, falling to the lowest level in almost two years. November's \$823.94 weekly factory paycheck (seasonally and inflation adjusted) is down 2.5 percent from last November. The over-the-year drop in paychecks seems inconsistent with the widely held belief that qualified manufacturing workers are hard to find.

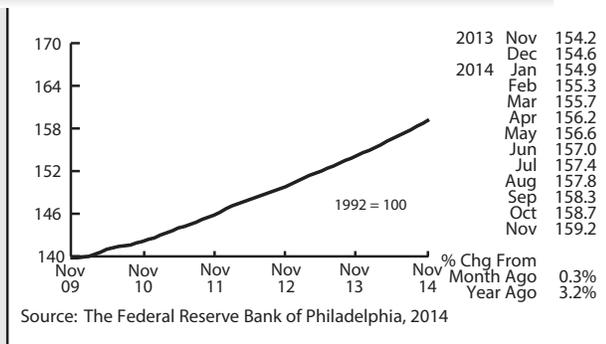
After peaking in May, the **Minnesota Leading Index** has dropped in four of the last six months including November. The waning leading index suggested that the rate of economic growth in the state will be slowing over the next six months. That prediction is consistent with the recent decline in Minnesota's PMI.

Adjusted **Residential Building Permits** fell off the shelf in November, plunging 40.2 percent to 854, the lowest level since May 2012. Hopefully November's sharp decline resulted primarily from the early winter weather. The biggest economic disappointment in 2014 has been the slower-than-expected increase in home building activity.

Adjusted **Initial Claims for Unemployment Benefits (UB)** spiked unexpectedly in November, skyrocketing to 22,838. Initial claims haven't been that high since last December. The early onset of winter in November may be behind the initial claims surprise.

by Dave Senf

United States Index



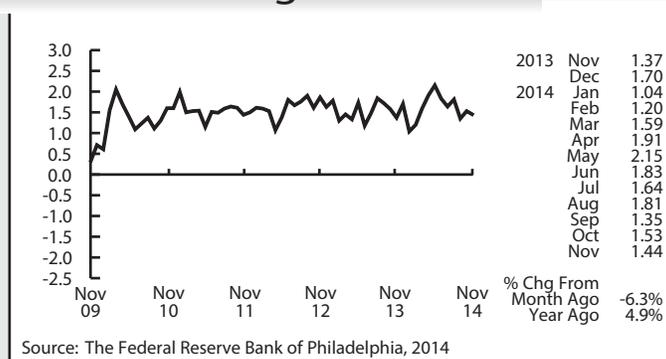
Note: All data except for Minnesota's PMI have been seasonally adjusted. See the feature article in the Minnesota Employment Review, May 2010, for more information on the Minnesota Index.

Minnesota Economic Indicators

Wage and Salary Employment



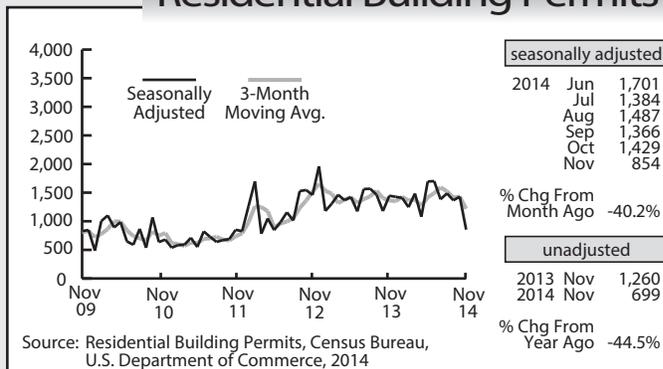
Minnesota Leading Index



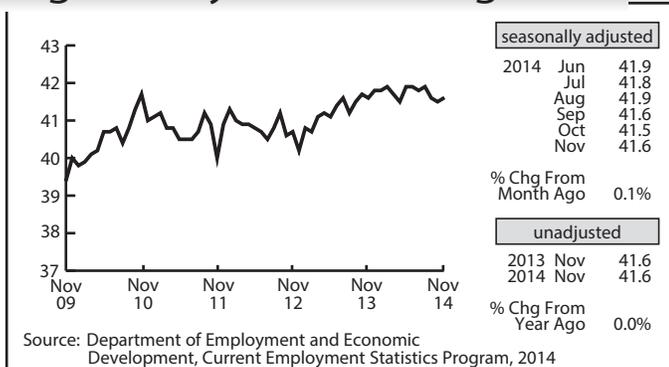
Purchasing Managers' Index



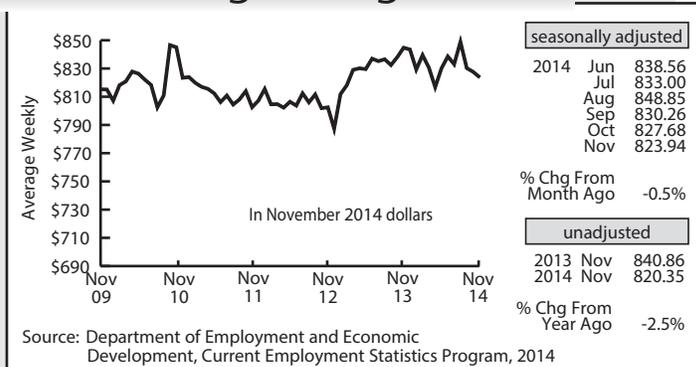
Residential Building Permits



Average Weekly Manufacturing Hours



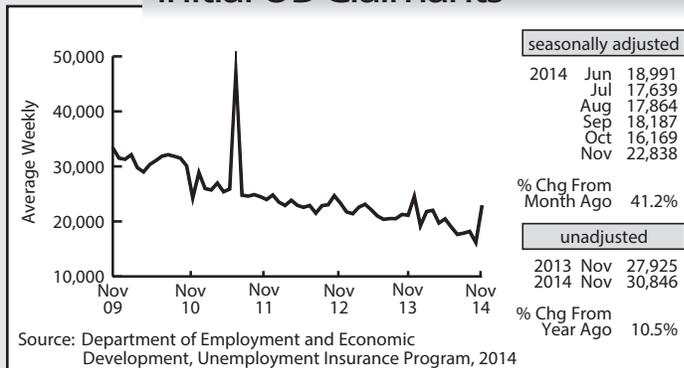
Manufacturing Earnings



Online Help-Wanted Advertising



Initial UB Claimants



Review

Minnesota Employment



DEED

Labor Market Information Office

1st National Bank Building
332 Minnesota Street, Suite E200
St. Paul, MN 55101-1351
651.259.7400 (voice)
1.888.234.1114 (toll free)
651.296.3900 (TTY)
1.800.657.3973 (TTY toll free)
e-mail :
DEED.lmi@state.mn.us
Internet :
mn.gov/deed/lmi

Labor Market Information

Help Line:

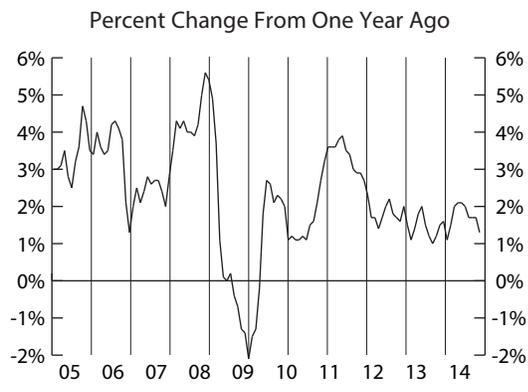
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U.S. Consumer Price Index for All Urban Consumers (CPI-U)

The CPI-U declined 0.3 percent in November on a seasonally adjusted basis. The gasoline index, the main cause of the decrease, posted its sharpest decline since December 2008. Indices for fuel oil and natural gas also declined; the energy index fell 3.8 percent. The food index rose 0.2 percent. The index for all items less food and energy increased 0.1 percent. The all items index increased 1.3 percent over the last 12 months, a notable decline from the 1.7 percent figure from the 12 months ending October. The index for all items less food and energy has increased 1.7 percent, compared to 1.8 percent for the 12 months ending October.



For more information
on the U.S. CPI
or the semi-annual
Minneapolis-St. Paul CPI, call:
651.259.7384
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What's Going On?

DEED Seeks Funding to Help Long-Term Unemployed

In November, DEED and the Minnesota Department of Human Services applied for \$18 million in federal funding that would provide training for long-term unemployed Minnesotans, enabling them to transition out of public assistance.

If awarded, more than 4,000 recipients of SNAP — the federal Supplemental Nutrition Assistance Program — in Minnesota would receive job-training under the pilot program and would secure employment at family-sustaining wages. Along with classes and training for high-demand careers, participants would receive intensive case management and support services.

Funding for the three-year pilot program would come from \$200 million included in the 2014 Farm Bill to encourage states to develop creative employment and training practices.

The U.S. Department of Agriculture Department is expected to announce state recipients in February.

Minnesota
Department of Employment and Economic Development



Choosing the Right Path

The Road Most Traveled

There are many ways to prepare for a profession. Some occupations can be learned through work experience or on-the-job training, others require formal postsecondary education, and many involve both. Therefore, the path to entry is an important piece of information for students and job seekers who are exploring careers and for employers who are looking to find qualified candidates.

The Bureau of Labor Statistics (BLS) provides the best-known source of information on the typical preparation for occupations, assigning categories for entry-level education, related work experience, and typical on-the-job training. Reacting to the changing labor market, BLS recently released updated education and training requirements to help people understand what is needed to enter and become competent in an occupation.

In the current system, each occupation is first assigned to one of eight categories reflecting the typical level of education most workers need for that occupation, starting with less than a high school diploma and ascending to a doctoral or professional degree (Figure 1).

In addition, occupations are divided into on-the-job training categories ranging from short-term, which is one month or less, to moderate-term, which spans more than one month but less than one year, to long-term, which stretches more than 12 months. Categories also exist for apprenticeships or internships and residencies. For work experience, occupations are grouped into categories including none, less than five years, and five years or more.

Using this information, a student or job seeker would find that they could become a retail salesperson with less than a high school diploma and short-term on-the-job training. Becoming a loan officer would require a bachelor's degree

and moderate-term on-the-job training, while a physician would need a medical degree and a residency.

These occupational assignments were determined in part by analyzing American Community Survey data from the U.S. Census Bureau. BLS economists looked at the educational attainment of workers in three categories — 18 to 29 years old, 30 years and older, and all workers in an occupation — and classified the occupations by age group.

Researchers also consulted the Occupational Information Network (O*NET), which regularly surveys workers and occupational experts on the education, work experience, and training needed for more than 800 jobs. Some occupations have more than one path to entry, so the categories which best describe the path that most workers need is selected.

Figure 1: Typical education needed for entry — represents the typical education level most workers need to enter an occupation. The assignments for this category are the following:

- Doctoral or professional degree
- Master's degree
- Bachelor's degree
- Associate's degree
- Postsecondary non-degree award
- Some college, no degree
- High school diploma or equivalent
- Less than high school

Source: Bureau of Labor Statistics

How Do Workers Measure Up?

While BLS does its best to provide useful information on education and training requirements, the category assignment may not match the current employment situation for several reasons. Some workers may have more education than needed for the job they hold, while others may have held the job before higher educational or training requirements came into place.

The BLS system simply identifies the typical education needed to gain entry into an occupational field, so it may not adequately take into account the education demanded from employers or across industry sectors. Take the example of a Registered Nurse (RN). While an associate degree is the minimum level of education required to gain entry into the field of registered nursing, many employers now require a four-year degree or more, depending on specialization.

In the RN example, real changes in the demands of the occupation have necessitated higher education, but that is not always the case. Unfortunately, it can be difficult to tell if heightened requirements in many occupations are in response to real increases in the demands of the jobs or simply a natural response by employers to a changing labor market.

Whether justified or not, to be considered for available jobs workers must measure up to the education and training requirements posted by employers rather than relying on BLS categories. This potential for misalignment was exaggerated during the recession, when the labor market saw an influx of unemployed workers with significant work experience and skills, to which employers adjusted by raising their desired job qualifications.

Employers looked to hire people with greater than entry-level skills to get them productive as quickly as possible. In that environment a job seeker with a high school diploma could apply for a job that typically requires a high school diploma or less, but an employer might prefer to find and hire a job seeker with some postsecondary training or job-specific experience and will hold the job open until they find that person.

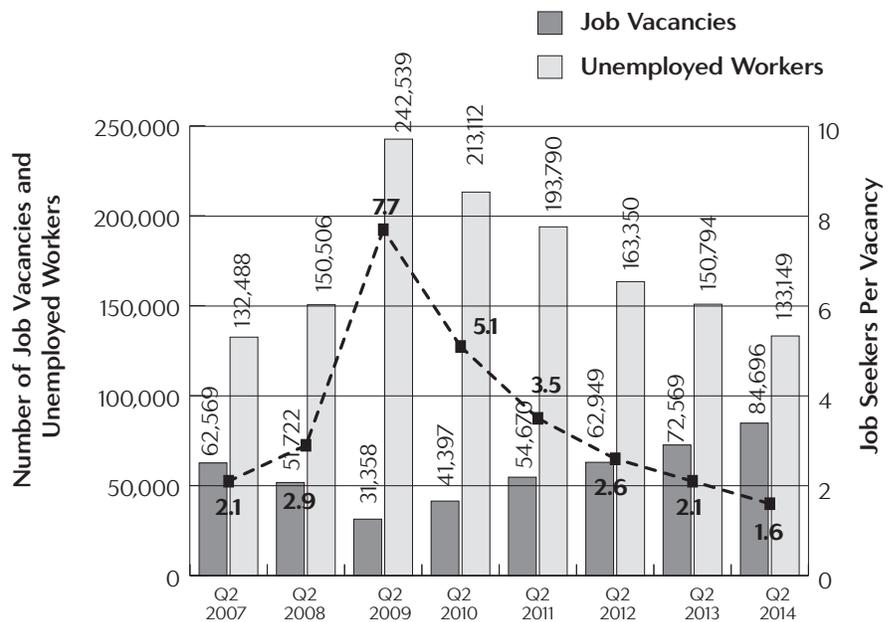
This has become more difficult for employers as the economy and labor market have recovered and tightened. To illustrate the point, in the second quarter of 2009 Minnesota had 242,539 unemployed workers while employers reported just 31,358 job vacancies, leaving 7.7 job seekers per opening according to DEED's Local Area Unemployment Statistics (LAUS) and Job Vacancy Survey programs. As the economy has improved, the state had just 1.6 job seekers per vacancy in the second quarter of 2014, lower than before the recession (Figure 2).

How to Measure Education Needed

A comparison can be made between the BLS educational levels and those levels sought by employers captured through DEED's Job Vacancy Survey data. If the data show that Minnesota employers are requiring higher levels of educational attainment for their job openings, this could justify a state-wide modification to the BLS-derived educational levels. Or it could be evidence that employers are looking for candidates with more education than they truly need.

Minnesota's Job Vacancy Survey captures the level of education required for jobs currently open. Through 2013 and into the second quarter of 2014, nearly 40 percent of Minnesota's job vacancies required some form of postsecondary education. More specifically, 8 to 10 percent of job openings required vocational training, 6 to 8 percent required an associate's degree, 17 to 21 percent required a bachelor's degree,

Figure 2: Minnesota Job Seekers Per Vacancy



Source: DEED Local Area Unemployment Statistics and Job Vacancy Survey

Table 1: Comparison of BLS and JVS Education Levels

BLS Occupational Classification	Count of Occupations			
	BLS and JVS Education Levels Match	BLS and JVS Education Levels Did Not Match	BLS Education Level > JVS	JVS Education Level > BLS
Less than High School diploma	45	46	0	46
High School diploma	211	142	31	111
Some college, postsecondary vocational award	17	25	15	10
Associate's degree	30	19	13	6
Bachelor's degree	147	27	24	3
Advanced degree	77	26	27	0
Total Occupations	527	286	110	176

Source: Bureau of Labor Statistics, DEED Job Vacancy Survey

Table 2: Comparison of BLS and JVS Education Levels

BLS Occupational Classification	Number of People Employed			
	BLS and JVS Education Levels Match	BLS and JVS Education Levels Did Not Match	BLS Education Level > JVS	JVS Education Level > BLS
Less than High School diploma	531,360	173,850	-	173,850
High School diploma	688,060	295,520	37,780	257,740
Some college, postsecondary vocational award	72,020	129,470	84,350	45,120
Associate's degree	110,320	8,840	4,640	4,200
Bachelor's degree	443,860	57,970	55,410	2,560
Advanced degree	68,690	36,670	36,670	-
Total Occupations	1,914,310	702,320	218,850	483,470

Source: Bureau of Labor Statistics, DEED Job Vacancy Survey

and 4 percent required an advanced or graduate degree.

Comparing employer demands and educational levels required under the BLS system with job openings reported by employers during the 13 years of DEED's Job Vacancy Survey data collection reveals an interesting trend displayed in Table 1. In nearly two-thirds (64.8 percent) of the 813 occupations compared, the BLS and the Job Vacancy Survey agree on the level of education required. This suggests that the BLS education classification system does a good job of capturing employer demand and is useful for workforce development (Table 1).

However, educational levels did not match in one-third of the occupations studied. For 176 occupations (21.6 percent) employers' requirements exceed the BLS classification, and for 110 occupations (13.5 percent) BLS exceeds the education level demanded by employers with job openings. In the vast majority of the cases where the educational levels differ, the difference was only one education level, either higher or lower.

This difference was most concentrated in occupations that BLS indicated required a high school diploma, but where Minnesota employers with job openings indicated that some form of post-secondary training was required. Additionally, several occupations had

a BLS-assigned education level of less than a high school diploma, while employers required at least a high school diploma for their job openings.

The match between BLS requirements and employer demands are even closer in the number of people employed in those jobs rather than the count of occupations, as shown in Table 2. In this case nearly three-fourths (73.2 percent) of actual jobs match exactly, while the other one-fourth (26.8 percent) have a mismatch. Most of these (68.8 percent) show higher employer demands than BLS levels, but again are most strongly concentrated in occupations that require a high school diploma or less (Table 2).

Adjusting Education Levels to Meet Minnesota Employer Needs

For the 286 occupations where Minnesota employers needed different education than BLS estimates, additional analysis can determine if the available data warrant a change in the minimum educational level. This could present a more accurate picture of current educational demands in the state, which would benefit students, job seekers, and career counselors.

About three-fourths (73.1 percent) of the 286 occupations would move just one level. For example, the BLS education requirement for home health aides was less than high school, even though observations of job openings from Minnesota employers overwhelmingly indicate that a high school diploma is the necessary education level needed for the job. The same is true for machinists — while some job openings require only a high school diploma, the education level prescribed by BLS, even more require a postsecondary award in Minnesota.

Sixteen occupations could benefit from an increase from one degree level to another — such as an associate's degree to a bachelor's or a bachelor's to a master's — including surgical

technologists, web developers, soil and plant scientists, and mental health and substance abuse social workers. Nineteen could move backward, such as cost estimators, appraisers and assessors of real estate, and tax examiners.

While those one-step educational changes should be easier for job seekers and the workforce development system to absorb, other occupations would require much more substantial changes. There were 77 occupations that could move two or more educational levels, including 20 that could move down and 57 that would move up the scale.

For example, there were 26 occupations that could jump from a high school diploma to a bachelor's degree, including lodging managers, substance abuse and behavioral disorder counselors, insurance sales agents, and detectives and criminal investigators. In some cases this is caused by state licensing requirements. In other cases, it is simply a reflection of employer preferences. Just seven occupations would go the opposite direction, from a bachelor's degree to a high school diploma, including radio and television announcers, interpreters and translators, and personal financial advisors.

Adjusting Expectations

DEED is in the process of evaluating the typical educational levels against employer demands to decide if a statewide readjustment is necessary to reflect current conditions. Even over 13 years, some occupations had too few employer observations on the education necessary for a job opening which may lead to inconclusive results.

In addition, these data are prone to issues of mal-employment or incidences of highly educated workers in low skilled jobs. Whether it's the choice of individuals to work in jobs that do not utilize their educational attainment or a necessity during or after a recession is not easily captured.

Regardless, understanding the educational requirements of a job before investing in the education or training can help students and job seekers make more informed choices, strengthening the entire workforce development system and better aligning the preparation of the workforce with the needs of employers. In the face of a tightening labor market, employers can also re-evaluate their requirements and perhaps expand the pool of candidates who are realistically qualified for the position they seek to fill.

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